

CLAIMS

1) An electric connector (2) comprising an insulating casing (4) defining a number of cavities housing respective electric terminals and having axes parallel to a first direction (A) in which said connector (2) is coupled to a complementary connector (3); a slide (16) fitted to said casing (4) to slide in a second direction (B) perpendicular to said first direction (A), and having first cam coupling members (19) receiving respective second coupling members (20) on said complementary connector (3) to produce a relative coupling movement between said connectors (2, 3) in said first direction (A) when said slide (16) moves in said second direction (B); and releasable retaining means (42, 43, 45, 47, 31, 32) defining a fully assembled position of said slide (16) to said casing (4); characterized by also comprising elastic means (35) generating an elastic load on the complementary connector (3) being coupled to said casing (4), so as to expel the complementary connector (3), in the event said slide (16) fails to fully engage said casing (4).

2) A connector as claimed in Claim 1, characterized in that said elastic means (35) are interposed between respective facing walls (17, 9) of said slide (16) and said casing (4).

3) A connector as claimed in Claim 2, characterized in that said releasable retaining means comprise

retaining means (42, 43, 45, 47) between said slide (16) and said casing (4), and which are activated upon said slide (16) reaching said fully assembled position.

4) A connector as claimed in Claim 3, characterized
5 in that said retaining means comprise at least one seat (45) and a pin (47), which are associated with said walls (17, 9) and are mutually engaged in said fully assembled position of said slide (16); at least one of said seat (45) and said pin (47) being carried by a pressure member
10 (43) opposing the thrust of said elastic means (35) as said slide (16) moves towards said fully assembled position.

5) A connector as claimed in Claim 4, characterized in that said elastic means comprise at least one elastic
15 member (35) varying in length in said second direction (B) and fixed between one (17) of said walls (17, 9) and a movable member (38) interposed between said walls (17, 9) and connected to said slide (16) to slide in said second direction (B); and in that said pressure member
20 (43) is carried by the other (9) of said walls (17, 9), and cooperates with said movable member (38) to counteract the thrust of said elastic member (35) as said slide (16) moves towards said fully assembled position.

6) A connector as claimed in Claim 5, characterized
25 in that said pressure member comprises an elastically flexible lance (43) projecting from said other (9) of said walls (17, 9) in said second direction (B), and movable, as said slide (16) moves towards said fully

assembled position, between a deformed configuration, in which it cooperates with said movable member (38) to counteract the thrust of said elastic member (35), and an undeformed configuration, in which it releases said movable member (38), and which is produced by said pin (47) engaging said seat (45).

7) A connector as claimed in Claim 6, characterized in that, in said fully assembled position of said slide (16), said movable member (38) is maintained by said elastic member (35) in a lock position preventing deformation of said elastically flexible lance (43) and release of said pin (47) from said seat (45); said movable member (38) being movable, in opposition to said elastic member (35), into an enabling position enabling flexing of said elastically flexible lance (43) and release of said pin (47) from said seat (45).

8) A connector as claimed in Claim 6 or 7, characterized in that said pin (47) projects from a free end (46) of said elastically flexible lance (43); and in that said seat comprises a recess (45) formed on a further lance (42) projecting in said second direction (B) from said one (17) of said walls (17, 9), cooperating in sliding manner with said elastically flexible lance (43) as said slide (16) moves towards said fully assembled position, and having a ramp-shaped free end (44) for flexing said elastically flexible lance (43).

9) A connector as claimed in Claim 8, characterized in that said movable member (38) comprises a plate

parallel to said walls (17, 9), having an opening (41) engageable by said lances (42, 43), and defining, along one side of the lateral edge of said opening (41), a shoulder (48) against which said elastically flexible lance (43) rests in said deformed configuration.

10) A connector as claimed in any one of the foregoing Claims, characterized in that said casing (4) comprises a hollow body (6) for connection to said complementary connector (3); and in that said slide (16) is at least partly engaged inside said hollow body (6) to slide in said second direction (B); said walls being defined by respective end walls (17, 9), perpendicular to said second direction (B), of said slide (16) and said hollow body (6).

11) A connector as claimed in Claim 10, characterized in that said slide (16) is substantially C-shaped, and comprises two lateral walls (18), which extend perpendicularly from the end wall (17) of the slide, slide through said end wall (9) of said hollow body (6), have said first cam coupling members (19), and have respective slots (40) elongated in said second direction (B) and engaged in sliding manner by respective lateral portions (39) of said movable member (38).